

I CLAIM:

1. A computer-based communication network comprising
a communication medium, and
5 plural communication nodes operatively connected to said medium, and having
transmission access thereto solely on the basis of time-slot transmission scheduling which
is self-performed substantially autonomously by said nodes.

2. A computer-based communication network comprising
10 a communication medium, and
plural communication nodes operatively connected to said medium, operable to
transmit information over the medium in a collision-avoidance manner based upon a per-
node, time-slot scheduling, access-control protocol which effectively operates continually
in relation to a span of time that brackets the current moment, with that span
15 encompassing an extent which includes currently knowable, prior, time-slot-scheduling
history, along with future time-slot-scheduling intension.

3. The network of claim 2 which is structured whereby nodal transmission of
information is accompanied by nodal transmission of all then-current, future time-slot-
20 scheduled nodal transmission intentions.

4. A computer-based communication network comprising
a communication medium, and
plural, self-timing-controlled, participating communication nodes operatively
5 connected to said medium and operable to gain transmission access to the medium based
upon prior transmission-scheduling knowledge, along with future transmission
deferential scheduling.

5. The network of claim 4 which is structured whereby nodal transmission
10 includes transmission of all then-current future transmission deferential scheduling.

6. A computer-based communication network comprising
a communication medium, and
plural, self-timing-controlled, participating communication nodes operatively
15 connected to said medium, each of said nodes being operable to gain collision-avoidance,
transmission-communication access to said medium only on the basis of a precursor, self-
established and designated, time-slot schedule for such transmission which is prepared
deferentially with controlling reference to any then currently existing and previously
established time-slot schedule that has been created by prior-transmitting, participating
20 nodes.

7. A transmission-medium access-control method practiceable by participating communication nodes that are network connected to such a medium, said method, from the point of view of each such node which anticipates the need to connect
5 to the medium and to transmit data, comprising

listening to network communication traffic which contains node-transmitted data packets, each having a time origin of transmission and being associated, in the overall, current network traffic, with a then-contemporaneous report of future-scheduled, time-slot differentiated and time-dimensioned, specific nodal intentions for transmission
10 access to the medium,

in view of that report, differentially self-scheduling, in a collision-avoidance manner, at least one self-interest time-slot for its own next transmission,

abiding by that self-interest schedule in terms of next seeking transmission communication access to the medium, and

15 on engaging in transmission in accordance with said schedule-abiding, associating that transmission with a new, then-contemporaneous schedule of all known, future-scheduled, transmission time-slot intentions.

8. The method of claim 7, wherein said listening by a participating node is
20 performed during a listening state which is defined for the node, said engaging in transmission is performed during a transmission state which is defined for the node, and said two states exist in mutually exclusive periods of time.

9. The method of claim 7, wherein each nodal transmission includes an element of content data, and another element which contains the mentioned then-contemporaneous schedule of future time-slot nodal transmission intentions.